

Input image containing
previously unseen object
(‘suitcase’)



CNN-RNN
Captioning
Model



Beam
Search



A cat sitting on top of
a refrigerator.

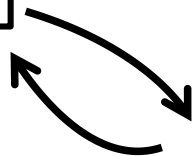


Image Tags
**cat, suitcase,
inside**



Constrained
Beam
Search



A **cat** sitting **inside** of
a **suitcase.**